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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,512	12/29/2000	Marcellin Espeillac	120301-2382A	8036
20999	7590	06/15/2004	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			LEUNG, JENNIFER A	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/751,512

Applicant(s)

ESPEILLAC ET AL.

Examiner

Jennifer A. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 11-21 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 29 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☒ Certified copies of the priority documents have been received in Application No. 09/001,486.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment submitted on March 16, 2004 has been received and carefully considered. The changes made to the Abstract and Specification are acceptable. Claims 1-10 are cancelled. Claim 21 is newly added. Claims 11-21 remain active.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 13, 14, 15 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 13, it is unclear as to the relationship between "a separation means" in line 2 and the "internal partitioning structure" set forth in claim 11, line 8. [Did Applicant intend to recite, a "Hydrotreatment apparatus according to Claim 11, wherein *the internal partitioning structure is a vertical partition* extending from a bottom of the fractionation unit."?].

Regarding claim 15, it is unclear as to the relationship between "a separation means" in line 2 and the "internal partitioning structure" set forth in claim 11, line 8. [Did Applicant intend to recite a "Hydrotreatment apparatus according to claim 11 wherein *the internal partitioning structure is a horizontal partition* extending from a vertical wall of the fractionation unit..."?].

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 11, 12 and 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Gupta (US 5,720,872).

Regarding claim 11, Gupta discloses an apparatus (FIG. 1; column 3, line 26 to column 5, line 47) comprising:

a hydrocarbon feedstock supply (fed via line **11**); a desulfurization reactor **1a** fed by said supply; at least one separate hydrotreatment reactor **1b** (i.e., FIG. 2 shows plural separate hydrotreatment reactors); a fractionation unit **2** disposed between the desulfurization reactor **1a** and said hydrotreatment reactor **1b**, said fractionation unit **2** containing an internal partitioning structure **18** defining two distinct injection zones **16a**, **16b** in flow communication with a common upper vaporization zone; and an evacuation line **25** for withdrawal downstream of light fractions from the vaporization zone; wherein said fractionation unit **2** comprises separate lines **13/17** and **27** for carrying, respectively, the effluents from the desulfurization reactor **1a** and hydrotreatment reactor **1b** to the fractionation unit **2**, with one of said lines **13/17** carrying the effluent from the desulfurization reactor **1a** into zone **16a**, and the other of said lines **27** carrying the effluent from the hydrotreatment reactor **1b** into zone **16b**; and wherein the fractionation unit **2** comprises two different draw-off lines **19** and **23** through which are removed from the injection zones **16a** and **16b**, respectively, the liquid bottoms of the effluent of the desulfurization reactor **1a** that are passed on to the hydrotreatment reactor **1b** (via line **19**), and the effluent from the hydrotreatment reactor **1b** that are passed on downstream (via line **23**).

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Regarding claim 12, Gupta discloses desulfurization reactor **1a** is a hydrodesulfurization or sweetening reactor (i.e., comprising catalyst **10a**, for hydrotreating various petroleum feedstocks to remove heteroatoms like sulfur; column 2, lines 14-25, 34-36).

Regarding claim 15, Gupta discloses the separation means (internal partitioning structure **18**; FIG. 1) is horizontal, and lines **13/17** and **27**, which carry the effluents from the desulfurization reactor **1a** and from the hydrotreatment reactor **1b** respectively, end at different heights of the fractionation unit **2**, respectively above (zone **16a**) and below (zone **16b**) the horizontal position of the separation means **18**.

Regarding claim 16, Gupta discloses the horizontal separation means **18** is a tray provided with at least one riser (see FIG. 1).

Regarding claims 17 and 18, Gupta discloses the hydrotreatment reactor **1b** is a hydrodesulfurization reactor (i.e., comprising catalyst **10b**, for hydrotreating various petroleum feedstocks to remove heteroatoms like sulfur; column 2, lines 14-25, 34-36).

Regarding claims 19 and 20, Gupta discloses another reactor (for downstream reaction stages) wherein the light fractions removed via evacuation line **25** (i.e., condensed vapor/distillates) are treated, said another reactor having a more specific action (i.e., hydrocracking, aromatic saturation, ring-opening; column 7, lines 17 to column 8, line 19).

Instant claims 11, 12 and 15-20 structurally read on the apparatus of Gupta.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta (US 5,720,872) in view of Lacy et al. (U.S. 3,314,879).

Although Gupta is silent as to whether the horizontally disposed separator **18** (FIG. 1) may comprise a vertical partition extending from the bottom of the fractionation unit **2**, it would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to substitute a vertical partition for the horizontal separator **18** in the apparatus of Gupta, on the basis of suitability for the intended use and absent showing any unexpected results, since said configuration is conventionally known in the art, as evidenced by Lacy et al. (see Figure for fractionation tower **1** separated into Zones **A** and **B** by baffle plate **2**; column 1, lines 43-69) and the substitution of known equivalent structures involves only ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958).

5. Claims 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta (US 5,720,872) in view of Lacy et al., as applied to claims 13 above, and further in view of Egloff (U.S. 1,707,349).

Although Gupta is silent as to whether the horizontally disposed separator **18** (FIG. 1)

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may comprise a cylindrical element disposed inside and concentrically with the vertical wall of the fractionation unit **2**, it would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to substitute a cylindrical element for the separator in the apparatus of Gupta, on the basis of suitability for the intended use and absent showing any unexpected results, since such separation means is conventionally known in the art, as evidenced by Egloff, and the substitution of known equivalent structures involves only ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958). In particular, Egloff (Figure; page 1, line 11 to page 2, line 3) teaches a chamber **3** comprising an inner zone and outer annular zone, as defined by a cylindrical element **4** disposed within and concentric with the chamber wall. The outer annular zone comprises an inlet line **15** and an outlet line **18**, the inner zone comprises an inlet line **17** and an outlet line **31**, and both the inner and outer zones communicate with a common evacuation line **20**.

***Response to Arguments filed March 16, 2004***

6. Applicant's arguments with respect to the rejection of claims 11-20 under 35 U.S.C. 103(a) as being unpatentable over Pruiss, in view of secondary prior art references, have been fully considered and are persuasive. Therefore, said rejections have been withdrawn.

7. Applicant's arguments with respect to the rejection of claims 11, 12 and 15-20 under 35 U.S.C. 102(e) as being anticipated by Gupta ('872) have been fully considered but they are not persuasive. On page 8 (second to fourth paragraphs), Applicant argues,

“Gupta issued from USSN 08/775,638, filed December 31, 1996. Gupta is not available against the present application. The present application has an effective filing date of

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December 31, 1996; an effective filing date the same as the US filing date of Gupta. Ergo, Gupta is not prior art as to the present application.”

The Examiner respectfully disagrees. As set forth in the MPEP, section 706.02(b), a rejection based on 35 U.S.C. 102(e) can be overcome by:

(E) Perfecting a claim to priority under 35 U.S.C. 119(a)-(d).

The foreign priority date must antedate the reference and be perfected. The filing date of the priority document is not perfected unless applicant has filed a certified priority document in the application (and an English language translation, if the document is not in English) (see 37 CFR 1.55(a)(3)) and the examiner has established that the priority document satisfies the enablement and description requirements of 35 U.S.C. 112, first paragraph.

Although the foreign priority document satisfies the enablement and description requirements of 35 U.S.C. 112, first paragraph, the rejection made under 35 U.S.C. 102(e) has not been overcome as the foreign priority date does not antedate the Gupta reference, but instead falls on the same day as the effective filing date of the Gupta reference.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

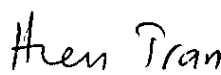
\* \* \*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 8:30 am - 5:30 pm M-F, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer A. Leung  
June 9, 2004 

  
**HIEN TRAN**  
**PRIMARY EXAMINER**